On-Demand Car Wash

We will have to accomplish the following items in our microservices implementation:

NOTE: Mentor is supposed to help trainees build this App Incrementally Phase by Phase and is free to add functionalities and complexities looking at the level of trainees and their abilities to go beyond the scope of this Case Study.

1.   Each microservice exposes a set of REST/ JSON endpoints for accessing business capabilities
2.   Each microservice implements certain business functions using the Spring(Boot) framework.
3.   Each microservice stores its own persistent data using H2/MySQL/MongoDB database
4.   Each Microservices must implement best practices such as, Exception Handling, Loggers, Test Cases, Static Code Analysis and build tools.
5.   Microservices are built with Spring Boot, which has an embedded Tomcat server as the HTTP listener.
6.   RabbitMQ is used as an external messaging service. Try finding out where it can fit in your case study.
7.   The UI, Website must be implemented using Angular

Tell us your car location and we will come to you. With Green Wash, you can get your car washed wherever you are at your convenience. Whether it's your home, salon, office or any other place, your car wash is just a few taps away. Few moments spend in signup can save your valuable time. All you need to do is just enter your car, address and payment details. A washer will come at your location and give your car a premium wash. The app also contains various packages and

add-ons to wipe, clean and dress your entire car from inside out. One of the best parts of the app is, users can even schedule future car wash and give reviews and ratings to washers. Just download the app now and book your first car wash today.

Client Requirement

Today, with the changing preferences and growing income, people are likely to roam around in sedans and SUV's. With the increasing car consumer market, car wash segment is all set to join the race. Forecasting the expanding markets of the car care services, GreenCarWash company approached Hyperlink InfoSystem to develop an interface that connects customers and service providers to avail the best wash services within the nearest proximity. The main aim of the client is to explore the untapped market opportunities by satisfying increasing consumer demands through professional car wash services. The app is developed on Android and iOS platforms and designed for the USA audience only.

Features

For Customers:-

- **Sign up/Login:**

  Sign up with basic details. A user can login using Email or Facebook.

- **Car & Payment Details:**

  Add car details along with its image. Also, add payment details for further transaction process.

- **Wash Now:**

After filling appropriate details, users can book their first car wash within few taps. All they need to do is select their car and wash package. They can even add a new car and include some extra wash add-ons if they wish to. Users can also guide washers by adding some important notes and information.

- **Schedule Later:**

An app also allows users to schedule car wash for upcoming dates. Just select their preferred date, time, location and package and it's done. The wash request is sent to the washers. If no acknowledgment is received from washer regarding approve/decline of wash request, a random washer is assigned to the user by admin.

- **Payment:**

A user can confirm the booking and pay washers through their debit/credit cards. Braintree Payment gateway is integrated for payments.

- **Receipt:**

After the successful car wash, washer sends payment receipt to the user which includes after wash car photo, package, and extra add-on details. Users are also facilitated to share information on various social media platforms.

- **Reviews & Ratings:**

After the successful car wash, users can share their thoughts and opinions for washers through reviews and ratings.

- **Notifications:**
  Users will be notified in the below scenario:
    - When washer accepts/rejects the request.
    - When washer starts and completes service.

     o   Receipt received.

- **Profile:**

  Users can view and edit their profile information.

- **My Orders:**

  Here users can view order details in below form:

o **Current Orders:** View list of pending, accepted and in-process orders.

o **Past Orders:** View list of completed and canceled orders.

- **Leaderboard:**

  This section displays the list of leaders who saved maximum water gallons by washing cars.

For Car Washers:-

- **Login:**

  Login using – Email or Facebook

- **Wash Request:**

  Wash Request is sent to the washer along with the user details. The washer can either accept or decline the request. On accepting the request, a washer can navigate through customer's address by Google Maps Integration.

- **Invoice Generation:**

  After successful car wash service, an invoice is generated and sent to customers which include washed car image, package and add-on details.

- **Ratings & Reviews:**

  After the successful car wash, washers can share their experience with users through reviews and ratings

- **Profile:**

  Washers can view and update their profile information like profile picture and contact information. In this section, user can view the ratings for washers too.

- **Notification:**

  Washers will be notified in the below scenario:

      o   Scheduled wash notification before 2 hours.

      o   New wash order.

      o   When users cancel wash request.

      o   On successful Payment by users.

- **My Orders:**

  Here washers can view orders in below form:

- o **Current Orders:** View pending accepted and in-process order list.
- o **Past Orders:** View completed and canceled orders

Admin Panel:

- **User Management:** It includes below modules:
  - o Customer:
    - Edit profile
    - View ratings
    - Active/Inactive customers
  - o Washer:
    - Add/Edit Washer
    - Active/Inactive Washer
    - View Customer's ratings and reviews
    - Export Washer's report to excel
- **Car Management:**
  - o Add/Edit car details
  - o Active/Inactive Car
- **Service Plan Management:**
  - o Add/Edit service plan details
  - o Active/Inactive service plans
- **Add-On Management:**
  - o Add/Edit Add-On List
  - o Active/Inactive Add-On List
  - **Promo Code Management:**
    - o Add/Edit Promo Codes
  - **Order Management:**
    - o Wash Now & Schedule:
      - View order details
      - Assign pending order request to washers
      - Shows the list of pending, accepted, under process, completed and canceled orders
  - **Report Management:**

    Admin can filter and generate reports based on order number, washer name, type, service, and date.

- **Leaderboard:**

  Shows the list of leaderboards.

- **Advance Report Management:**

  Admin can generate advanced wash reports based on business, sales, users and locations.